

Light Sport Repairman Inspection - Airplane Overview & Safety Topics

Legend Aero Holdings, Inc.

Burgaw, NC (7NC1)

Inspection Course CY 2026

FAA Course LSRIA 062601 (Light-Sport Repairman Inspection Airplane)

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Light Sport Repairman Inspection (LSRI) - Airplane Training

Introductions & Items

- Course Overview
- Topics
- Instructors/SMEs
- Safety Topic

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI Training - Overview

This training is based upon and derived from:

- 14 CFR Part 65.107 Repairman Certificate (Light-Sport): Eligibility and Training Courses.
- AC 65-32 (current edition) Certification of Repairmen (Light-Sport)

A student completing this course should obtain a level of proficiency that enables the individual to inspect an aircraft (in the category (Airplane), and class as applicable) and determine that the aircraft will be in a condition for safe operation



© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI Training – Overview (continued)

This Light Sport Repairman Inspection (LSRI) airplane course is also based on the information, guidance and requirements found in current editions of:

- Federal Aviation Administration (FAA) Order (FAAO) 8000.84 (latest revision) Light-Sport Repairman Training Course Acceptance and Continued Operational Safety.
- FAAO 8130.2 (latest revision) Airworthiness Certification of Aircraft.
- Title 14 Code of Federal Regulations (CFR) Part 91.9(a) Civil Aircraft Flight Manual, Marking, and Placard Requirements.
- Title 14 CFR Part 91.319 Aircraft Having Experimental Certificates: Operating Limitations.
- Parts of Title 14 CFR Part 91 Subpart E Maintenance, Preventative Maintenance and Alterations.
- Title 14 CFR Part 65.107 Repairman Certificate (Light-Sport): Eligibility and Training courses.

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI Training – Overview (Continued)

Completition of the course materials allows the attendee to achieve:

- A general working knowledge of, and the principles of, aircraft inspection
- The training is **inspection focused** and **NOT** on the performance of **maintenance activities**



© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI Training – Overview (Continued)

The training achieves this through the following items:

- Exact alignment with guidance found in FAAO 8000.84C (Jan 27, 2026)
- Instruction by lecture, demonstration and discussion with FAA certified mechanics and Subject Matter Experts (SMEs)
- The training utilizes practical inspection applications using light sport aircraft components/ airframes/engines
- The course fosters the continual development of practical skills that are associated with airplane inspections (focused on small airplanes less than 6,000 lbs.)

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Course Content

- This course is 16 total training hours offered over two days - 12 hours of lectures and 4 hours of practical applications of the principles discussed in the lectures
- The course has an exam with 50 multiple choice questions based on the lectures and applications of the inspection checklists/tools and regulations
  - To successfully complete the course the applicatant must achieve 70% or higher on the exam score
- Students will be provided the opportunity to complete a written critique that will be used to improve the course content
- Upon successfully passing the course a course completion certificate is issued to the applicant and FAA form 8610-3 is completed so the applicant can request their inspection certificate from the FAA

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI – Course Content (cont.)

Aircraft with experimental airworthiness certificates listed in the following Table are addressed by this inspection course (21.191 Issue of experimental airworthiness certificates)

Experimental Airworthiness Certificates	Issued in Accordance with 14 CFR Section
Amateur-built aircraft	21.191(g)
Aircraft that did not meet the provision of 14 CFR § 103.1, and that were issued an experimental airworthiness certificate on or before January 31, 2008	21.191(i)(1)
Kit-built light-sport aircraft	21.191(i)(2) or (k)
Former light-sport category aircraft	21.191(i)(3) or (l)

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI – Eligibility Requirements

You must:

- Be at least **18 years old**
- Be able to **read, write, speak,** and **understand English**
- Complete FAA-accepted training
- Pass a written test from the training provider



© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI – Eligibility Requirements (Continued)

You must provide to the FAA the following proof of eligibility when you apply for the certificate:

- Government-issued photo ID
- Completed FAA form 8610-3
- Evidence of completing applicable training and test for the rating and category privileges being requested



© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI – Guidance from FAAO 8000.84C

This inspection-rating course (16 hours):

- Focuses on determining condition(s) for safe operation in the Airplane Class only
- Discusses Operating Limitations for amateur built aircraft
- Discusses the Inspection of installed systems not traditionally listed in 14 CFR Part 43 Appendix D: Scope and Detail of Items (as applicable to the Particular Aircraft) To Be Included in Annual and 100-Hour Inspections.
- References the importance and use of FAA materials via the Dynamic Regulatory System (DRS) to ensure currency of information

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

FAA Regulations - Overview

This inspection-rating course (16 hours):

- Appendix D may be referenced as guidance for a conditional inspection, but does not override experimental aircraft operating limitations
- Appendix D is a valuable resource to establish inspection criteria

- When used by FAA staff, FAA Order 8130.2 (latest revision) establishes the procedures for issuing airworthiness certificates, export certificates of airworthiness, and special flight authorizations for aircraft

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI - Scope of Inspection Rating

Inspection rating under 14 CFR Part 65.107(a)(1) is specifically limited to the aircraft category that they own

- A light-sport repairman with an inspection rating may only perform the conditional inspection on an amateur-built (EAB or ELSA) aircraft owned by the repairman



© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI - Authorized Privileges

- The holder of a repairman certificate (light-sport) with an inspection rating may perform the annual condition inspection on an aircraft:

  (1) That is owned by the holder

  (2) That has an experimental airworthiness certificate issued in accordance with 14 CFR Part 21.191(g), (i), (k), or (l) of this chapter; and

  (3) That is in the same category, and class as applicable, of aircraft for which the holder has completed the training course specified in 14 CFR Part 65.107(c)

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI Course - Explicit Limitations

This course provides inspection training only

- No Special Light Sport Aircraft (SLSA) inspections
- No 100-hour or progressive inspections
- No privilege expansion through course content



© Legend Aero Holdings Inc. 2026. All Rights Reserved.

FAA Order 8130.2 – Operating Limitations

The guidance found in FAAO 8130.2 (latest revision) identifies who may perform the conditional inspection

Typical language may authorize:

- The original builder (Experimental Amateur Built repairman certificate),
- FAA-certificated mechanics,
- Repair stations,
- Light-Sport Repairmen (inspection or maintenance) — only if explicitly listed

A 14 CFR Part 65.107(a)(1) repairman **must verify** that their certificate type is named in the operating limitations

If the certificate is not listed, the inspection may not be performed, even if the regulation would otherwise allow it

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

LSRI - Training Overview Takeaways

- The operating limitations specifies who can perform the inspection
  - Guidance associated with operating limitations are found in FAAO 8130.2 (current edition)
- 14 CFR Part 43 Appendix D does not override operating limitations
- Inspection of nontraditional systems can require manufacturer and FAA guidance. Example:
  - Electric Propulsion
  - Ballistic Parachute Systems, etc.

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Training Overview - Practical Applications

Students will perform some of the Practical Applications discussed in the training:

- The use of manufacturers checklist and, in the absence of a manufacturers' checklist, students will construct a checklist for the conditional inspection of an engine/airframe and propeller
- Perform part of the conditional inspection on an engine/airframe and propeller
- Inspect an airframe/engine/propeller/appliances for compliance with operating limitations
- Document the content, form, and disposition of aircraft maintenance records, reflecting approval/disapproval for return to service following a conditional inspection

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Training Overview - Practical Applications (Cont.)

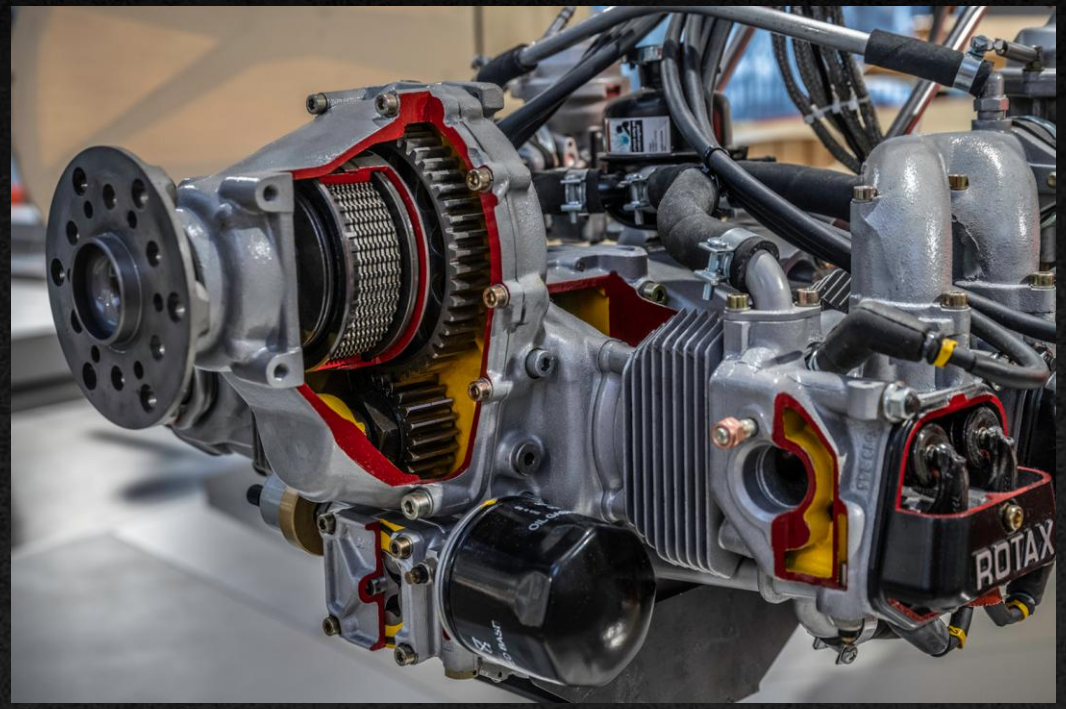
Some of the Practical Applications covered/discussed in the training are :

- Compliance with Airworthiness Directives (AD), Safety Directives, Service Letters and/or Bulletins, or Instructions for Continued Airworthiness (ICAs)
  - Safety Directives and how they work, what safety directives do, where do they come from and when do they apply?
  - Do ADs apply to ELSAs?
- Maintenance records requirements 14 CFR Part 91.417
- Checking a given aircraft for airworthiness directive compliance
- Entering the results of a conditional inspection in maintenance records
- Determine when the next conditional inspection is needed

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Training Overview – Inspection Lecture Topics

- Aircraft fabric covering & sheet metal structures
- Composite structures
- Landing gear & brake assembly
- Wheels and tires
- Cabin heater system equipped with an exhaust heat exchanger
- Magnetic compass
- Fuel systems
- Wiring defects
- A potentially damaging engine event, including but not limited to any of the following:
  - sudden stoppage
  - over speed, or over temperature



© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Training Overview – Inspection Lecture Topics (Continued)

- Spark plugs
- Engine fuel system
- Engine mounts
- Engine for fluid leaks after maintenance performance
- Aircraft engine for service bulletin compliance
- Oil cooler and/or oil lines for leaks
- Oil filter or screen
- Check gap of spark plugs
- Fuel selector valve
- Exhaust system components
- Exhaust heat exchanger
- Aircraft battery
- Aircraft battery compartments
- Inspection techniques/methods using the following: visual, metallic ring test, dye/fluorescent penetrant
- Identification, selection, installation, and/or use of aircraft hardware
- Safetying of components and/or hardware
- Visual inspection of various welds
- Inspection for and identification of corrosion in any of its various forms

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Additional Resources - FAA

The FAA has a new website for Light Sport Repairman. The website has a wide range of useful information. The information supports:

- Each type of repairman and
- Lists the Light Sport Repairman Course providers



The repairman website is located at the following link: https://www.faa.gov/repairmen

The FAA provides references and supporting materials via DRS (Dynamic Regulatory System) to ensure information currency. The DRS Website is located at the following link:

https: https://drs.faa.gov/browse

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Course Agenda

- LSRI Overview & Safety
- FAA Documents and Records
- Inspection Process Overview , Conditional Inspection Checklists & Data
- Generic Inspection Checklists Practical
- Weight & Balance

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Course Agenda

- Corrosion In Small GA Aircraft
- Detection Of Failures
- Hardware/Tools/Safety Equipment
- Inspection - Engine
- Inspection – Propeller & Appliances

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Course Agenda

- Inspection Airframe
- Inspections Practical – Airframe, Engine, Propeller & Appliances
- Logbooks and Regulations
- Written Exam & Course Evaluations

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Instructors

The instructors have a combined total of more than 75 years experience operating & maintaining small general aviation aircraft less than 6,000 lbs.

- Michael Lee Corn – A&P, ATP, CFI, Flight Engineer, BS Engineering University of Michigan; Retired Captain American Airlines
- Phillip Glen Ellison – A&P #2845221, PhD & MS Mechanical Engineering, Northwestern University, BS Chemical & Nuclear Engineering University of Cincinnati; Retired General Electric
- Paul William Vause III – Repairman Light Sport Aircraft #4045132, BS Aviation Management Southern Illinois University; USMC Retired AME/AMS/AMH, Platforms T/AV8A/B, F35B

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

Subject Matter Experts (SME)

- Wade Hanchey – Rotax Engines/Tools and Instrumentation, Retired Electrical and Instrument Technician, USN Nuclear Instrumentation and Controls (Submarine Service)
- Tim Lovell – Rotax Engines/Propellers, Ex RAF/Retired USAF Air Traffic Controller, Weather Observer, Instrument Flight Procedures Developer/Software Test Engineer
- Al Meadowcroft – Welding Inspection/Repair of Welded Aircraft Components, Instructor Welding Cape Fear Community College, LPN
- Dave Ross – General Airframe/Power Plant and Appliances, CFII
- Mark Thoman – Aircraft Fabric Installation/Repair, Retired USMC - Helicopter and Fixed Wing Instructor/Platforms CH-46 & KC-130, BS Education
- Aubrey Thompson – Avionics, Instrumentation and Hydraulic Systems - Retired Cape Fear Community College Electronic/Hydraulics Instructor, MS & BS Physics, Certified Electronic Technician (CET)

© Legend Aero Holdings Inc. 2026. All Rights Reserved.

SAFETY ALWAYS COMES FIRST !!!
Conditional Inspection Safety Considerations

- Eye Protection
- Hearing Protection
- Slip Hazards (Foot Protection)
- Tool Control
- Sharp Edges/Safety Wire
- Chemicals
- Thermal
- Electrical Hazards
- Hazardous Vapors
- Cap for Long Hair
- BE SAFE/WORK SMART/GO HOME

© Legend Aero Holdings Inc. 2026. All Rights Reserved.



Light Sport Repairman Inspection - Airplane Overview & Safety Topics

Legend Aero Holdings, Inc.

Burgaw, NC (7NC1)

Inspection Course CY 2026

FAA Course LSRIA 062601 (Light-Sport Repairman Inspection Airplane)

© Legend Aero Holdings Inc. 2026. All Rights Reserved.